

Adaptation to Change and Re-designing of Governance Systems: Cases from Small-Scale Rural Forestry

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Abstract Changes in small-scale forest governance as a reaction to global changes are viewed from the system dynamics perspective, focused on two levels of dynamic systems: the policy system with sets of interactions at the national level and the management system at the local level. These interactions are considered through permanent adaptation and re-shaping of stakeholders' networks and positions provoking further changes in the systems. Empirical evidence has been obtained from two case studies related to small-scale rural forestry in distinct contexts—France (the Territorial Forestry Charters) and Kyrgyzstan (collaborative forest management and leasing of forest plots)—and viewed through a theoretical framework of social-political systems dynamics. The changes caused by the systems' capacity for adaptability and resilience are expressed through a double spiral of decision-making, characterising the interactions between national policies and local management practices. The analysis leads to a conclusion that changes are basically determined by the formal and informal stakeholders' strategies developed in a specific context and their mutual adaptation aimed at system resilience.

Keywords Forest policy reform · System dynamics · Double spiral · Resilience

Change in Governance of Small-Scale Forests as Seen From Dynamic Systems' Perspective

Introduction

Governance, as a mechanism of coordination other than state hierarchical steering, is based on self-organising inter-organisation networks and opens the decision-making

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to non-state actors (Héritier 2002), expanding communication and interaction between them. The dynamic of global changes introduces the imperative of iterative multi-level coordination and adaptation, whereas the uncertainty of changes requires democratic and accountable expertise.

In this paper, a vision of changes in small-scale forest governance as reaction to global changes is proposed, built upon three basic considerations: conceptual, empirical and theoretical.

Three Perspectives of Governance

The introduction of governance mechanisms in forestry as a basic pre-requisite of sustainability extends the resource vision of forestry and promotes integration of forest policy into a broader social-economic and political environment (GoFOR 2007). In this framework sustainability may be given controversial definitions, including: (i) maintenance of ecological characteristics; (ii) maintenance of yield, productivity and services; or (iii) sustenance of social functions and forest-dependent human institutions, including symbolic and religious aspects (Oesten 2005; Saastamoinen 2005).

The diversity of interpretations of complex values increases when various demands for policy input expressed at different scales and levels are considered. Thus, at the international level defining general principles and common strategies, the demands are of a global character, in the sense of the ‘planet importance’ and in the meaning of general values, oriented to the preservation of a ‘common welfare’ for future generations. Consequently, when it comes to translation of global (abstract) values into national and then local (concrete) contexts, this uncertainty brought by the interpretation of *sustainability* introduces uncertainty into the understanding of what is a forest policy at the global level and what is forest management at the local level. In each particular case, the interpretation is produced as an outcome of interactions between specific social and political processes and contexts. A policy is defined more by a set of relations among the constituents than by the structure and content of institutional components, which are an integral and co-defining part of the relations.

The strategic nature of global objectives may create a gap or an opposition in priorities and interests of today’s population (e.g. preservation of a resource for the future generations vs. satisfaction of immediate needs). Viewed from this perspective, sustainability may be treated as an issue of human behaviour and interactions related to the solution of concrete problems with diverse sets of values and moral judgements, thus the vision of sustainable forest management and, as a consequence, of a forest itself will differ at different scales: global, national, local (Buttoud 2007).

An Empirical Perspective: Governance at a Local Scale

The empirical consideration of changes in the small-scale forest governance as a reaction to global changes is based on the concrete evidence of changes in forest policy and management structures. The requirement of ‘sustainability’ has brought a

shift in the conventional view of forestry as a purely technical and resource-oriented matter, thus inducing a general revision of objectives and norms in policy-making through the introduction of governance in forestry which is supposed to bring cognisance of social processes and functioning of society, thus leading to socially accountable and democratically legitimate policy choices. Consequently, governance induces the changes in the roles and positions of decision-makers, obliging them to consider multiple values in order to satisfy changing expectations. Globally, three adaptation tendencies may be traced in forest policy: (i) a change in management objectives with a shift from industrial forestry to environmental forestry; (ii) a change in scale, from forest policy focused on public forest management to grant-driven afforestation on private land; and (iii) a change in financing logic towards incentives for regional development projects with a territory approach, considering the forests as part of a general landscape.

At this point the international system of forest policy-making comes into a direct interaction with national-level systems of forest policy definition. At the national level, the complexity created by the opposition 'global-local' and 'abstract-concrete' is complemented by the 'horizontal' and 'vertical' complexities in the architecture of national structures and institutions. The internationally defined principles are expected to acquire normative policy shaping at the national level, whereas policy decisions need to consider the whole complexity of inter-linked societal systems and of economy, politics (including legal systems), expertise (including science), social sphere and ethical values (Parsons 1963; Renn 2004). On the other hand, in implementation, the policy-makers are usually constrained in resources, hence in practical decisions they tend to prefer the intervention with 'what is available' (including knowledge, resources, and normative and time constraints). So, regardless of principles, the global objectives and international initiatives in a concrete context are tailored to local capacities and priorities. The more 'local' is the scale, approaching the practical level, especially in small-scale forestry, the more practical and problem-solving-oriented the management decision tends to be. Such tailoring facilitates social acceptance from some groups of stakeholders, but does not necessarily consider all the values attributed to the forest. A policy implementation analysis at the small-scale level is often referred to as an 'effectiveness analysis' (Bisang and Zimmermann 2006), whereas environmental elements and ethical values may be disregarded.

The interactions between international policy initiatives as well as national and local societal changes have created new elements of co-ordination in forest policy, on top of the former central elements as of market and state co-ordination. These new elements are based on the networks of actors and partnerships and approaches to moderation and solution of societal conflicts. The old structures are not prepared for the new relations so new institutions are formed for delivering a broader range of multiple benefits, providing highly dynamic structures and opening the forest policy arena to new actors. In this context there is a change in relationship between the state and the society. The state cannot any more act merely as a sovereign and care-taking 'financer', but needs to seek possible forms of co-operation with various actors. Thus a regional or local level, where concrete policy actions are to be defined

and implemented, comes as a third level (additional to the international and the national levels) of the ‘policy-management chain’.

The complexity of the local level is characterised by the concentration, sharpening and ‘practicalisation’ of all the previously indicated complexities: the uncertainty of concepts and their interpretation; the opposition between the ‘public goods’ with open access (common goods) versus individual rights and interests; the ‘abstract’ global values versus ‘concrete’ immediate priorities; inter-generational versus intra-generational interests and demands; abstract versus concrete rights. Such oppositions sharpen actors’ interests and accelerate their reactions to context changes through the establishment of new advocacy coalitions and stakeholders’ networks ultimately aimed at preservation of their functions and positions.

Theoretical Perspective: Small-Scale Forest’s Governance Viewed through a Systems Dynamics Framework

From the theoretical perspective, viewing forest policy in systemic terms helps to introduce some degree of coherence in the complexity and uncertainty of interactions in the dynamics of small-scale forest governance. The political system definition of Easton (1965b) as an ‘input-output framework’ attributes to policy a character of a *process* with capacities of adaptation, reproduction and change due to the ‘feed-back loops’ based on a fluid changing system of steps in a decision-making process. These steps are presented as being comprised of various expressed demands for a particular output (policy); a competition for these ‘demands to be processed in the system’, and, finally, an interaction of the taken decision (new policy) with the environment which is creating new demands and new groups supporting or opposed to it. This interaction creates ‘feedbacks’ and *iterativity* of the process, promoting change in the political environment, roles and institutions and alters the process outputs, consequently changing the actors’ positions and their demands for new outputs.

In the systemic perspective, forest policy, as a general policy sub-system, brings up additional complexities at two levels: (i) *external inter-relations* with general policy systems as well as with other sub-systems and their environments (e.g. interactions between the international forest policy dialogue and national forest policy, and between the forest policy and agricultural and environmental sector policies), and (ii) policy systems and *internal complexities* within the sub-system itself linked with the diversity of expressed demands in relation to the resource. As a consequence, a diversity (and even sometimes an opposition) of demands for a policy output is created.

The *evolving contexts* (at both the global/national and local levels) contribute to a further complexity in the interactions between the demands for a policy input, the support-groups and environments. In order to be successful, policy-makers require support of other actors, the ‘demand-producers’. The other actors may also seek partnerships in order to strengthen their position and be more successful in the promotion of their specific demands. As a result, coalitions may be formed on the basis of shared beliefs and values, as actors who share similar perspectives forge relationships with each other. Competing advocacy coalitions exist within any

policy domain and, in general, one of these coalitions will be dominant (Sabatier 1988).

In order to create a comprehensive picture of a forest policy reform process and understand the determining factors' impact and related changes in the policy (including in the context), a systems dynamic vision with an analysis of casual relations is a relevant approach. A policy is hardly an entirely closed political process, a sealed 'black box' (Easton 1965b; Forrester 1975). Each system receives most of its inputs from the neighbouring systems' elements (both from the cross-scale and from the inter-scale) while simultaneously passing most of its outputs on to them as a feedback.

The global international system of policy-making therefore interacts with national systems of forest policy measures' elaboration which, in turn, interact with a local or regional system of programming concrete forest policy actions, intended to determine the management of the smaller-scale forest estates. Each of those systems and sub-systems continuously receives inputs from the other systems and sub-systems whilst sending outputs to them. This *communicative action* conceptual framework for decision-making makes the policy systems *complex adaptive systems*. They are complex due to their diversity and multiplicity of various levels of inter-relations and inter-connected elements, whereas they are adaptive in that they have the capacity to change and learn from experience (Gunderson and Holling 2002). Such complexities and adaptation, with consecutive changes in positions and expressed demands, produces multiple interconnecting 'feedback loops', creating a situation where 'a new policy, which is intended to solve a problem, causes reactions in other parts of the system that counteract the new policy' (Forrester 1975).

Viewed in this framework, any policy change is on the one hand a process driven by exchanges between various constituents (stakeholders), organised in a common search for a stability of the whole system, whereas demands for a change (or a policy input) are translated into outputs aimed at an adaptation to the context whilst keeping the common identity. On the other hand, the stakeholders and actors are both change 'demanders and creators' and constituents of cross-systems and sub-systems. They are always trying to manipulate the interaction in order to preserve or improve their position in one of the sub-systems. The general human capacity for foresight, deliberate action, self-organisation and learning provides that the dynamics and direction of change in policy systems is influenced by individuals and groups). This opposition between the natural *resilience* of a system in search of the maintenance of its functions, and *adaptability*¹ of some actors of this system creates a permanent gap between the demands and solutions. This gap may be analysed as both a result from and a source of the dynamics of cross-interactions within and between each level and scale. Hence, this gap is a basic constituent of the policy itself.

¹ Following Walker et al. (2004), *resilience* is the capacity of a system to absorb disturbance while retaining essentially the same functions, structure, feedbacks and, therefore, identity. *Adaptability* is viewed here as the capacity of the actors of a system to manage resilience intentionally.

Dynamics of Small-Scale Forestry Governance as a Double Spiral

In systems dynamics, the goal of a policy is a component to which a feedback loop process is striving (Forrester 1975; Easton 1965a), but, because of the inter-relations between levels, the goals are not constant. So, through the mechanism of mutual adaptation, the solution retained is never stable due to the difference and opposition between multiple inputs and outputs. Going through similar interactions in a sequence of linkages, the system evolves along a spiral, where the final state never corresponds to the initial demand for change. The strategy of search for control by the stronger actors leads to a mechanism which may be presented through a double spiral of a decision-making process (Kouplevatskaya-Yunusova and Buttoud 2006).

A first spiral, with an *outward* direction (the spiral of development, open system and spiral of learning), corresponds to the preliminary stages in a policy-reform process (Amdam 2000). Adapted to the local scale, it corresponds to the perception of the national policy, where a general demand is expressed and the main actors start to seek coalitions to reinforce chances for promoting this demand (Fig. 1). Their positions are still open for adaptation and learning (input) from the other actors. The increasing radius of the spiral is defined by the intensity of interactions. Progressively, due to the learning and newly created coalitions, the initially defined goal (demand) changes. The role of these actors in the process changes correspondingly.

This change brings an inversion towards an *inward spiral* (envelopment, closed system, spiral of control, as expressed by Amdam (2000), creating a *double spiral* (Kouplevatskaya-Yunusova and Buttoud 2006). The stronger actors, those, who are quicker to understand the process dynamics, try to take control over the process, looking for a stability of their proper system. The changes are accepted by such actors provided there is no evident risk of losing their initial power and functions (MCPFE 2002). They create new partnerships and coalitions adapting to the changing institutional architecture. As soon as the ‘critical mass’ is reached, when further adaptation may cause a change in the initial state, functions and power, this stronger actor (or a coalition of several actors) takes the lead over the process with one ultimate objective to (at least) preserve its initial capacities and power. This inward spiral is usually shorter than the outward one, as the interactions’ intensity decreases, whereas a change in the position of one actor’s group necessarily causes

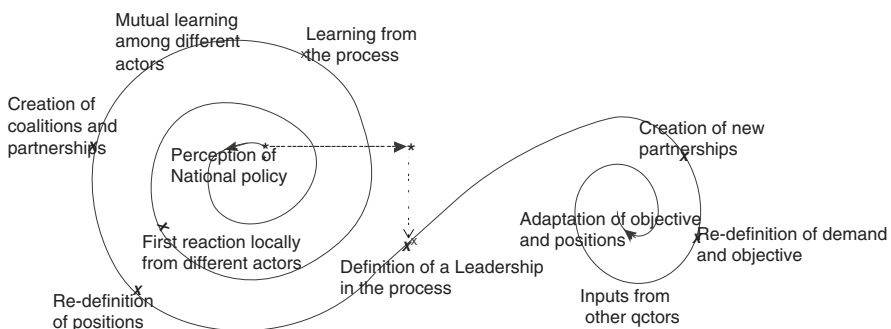


Fig. 1 The double spiral of power-redistribution in a forest policy process dynamics

a change in the positions and demands of the others. These cross-changed inter-relations present a risk for system stability, hence creating conditions for another spiral of openness and adaptation, to avoid a collapse.

This dynamics of inter-relations between the actors with a tendency to impose the leading (at a specific time, scale and place) interests, results in a situation where the finally retained solution in terms of practical forest management usually differs from the one designed at the initial stage of policy orientation. A gap is defined between the global vision and priorities and the local reality and demands.

Case Studies of Dynamics in Local Small-Scale Forest Management

This vision of the change in forest governance viewed from the dynamic system perspective is illustrated by examples selected in two countries—France and Kyrgyzstan—with considerable evolution of forest policies’ objectives and measures, especially related to small scale-forestry. In both cases the changes in the national and local policies are introduced in response to the international initiatives: the introduction of the Territorial Forestry Charters in France as a reaction to the EU forest and regional development strategy, and Community Forest Management in Kyrgyzstan promoted by the international dialogue on sustainable development and requirements from a donor community. The tension between the intentional adaptability and quest for functional resilience in both cases leads to a sequence of outward and inward spirals. The global objective of sustainable development has found contrasting reactions in the local policy processes due to the difference in the local contexts and institutional capacities to absorb the disturbance caused by the changes. Analyses of the CFT case in France has been commenced under the EU GoFOR project ‘New Modes of Governance for Sustainable Forestry in Europe’ (GoFOR 2007), aimed at the assessment of the evolving practices of new modes of governance in 10 countries of Eastern and Western Europe. The analysis of social system resilience capacity, with the CFT process as one example, has been undertaken within the continuing ANR-ADD research project POPULAR—‘Public policies and rural management of a tree and a forest: sustainable alliance or a doomed dialogue’ (POPULAR 2008). The case of CFM in Kyrgyzstan was studied as part of a PhD study on forest policy reform in Kyrgyzstan (Kouplevatskaya 2006). For both cases the information sources are based on the field interviews with the main actors, study of experts’ reports and participants’ observation.

The French Case Study: The ‘Territorial Forestry Charters’

The Territorial Forestry Charters (*Chartes Forestieres de Territoires*, CFT in French) represent a new flexible structure of local governance specific to France, introduced by the *Law on the Forests 2001* as an instrument of sustainable development of rural territories through inclusion of the advantages brought by the forests into their economic, social and cultural environment and multifunctionality of forests (MAP 2001). Being based on stakeholder participation, CFT is entirely in

line with another governance process—the National Forest Programme (NFP), as defined by MCPFE (MCPFE 2002), with participatory mechanisms, decentralisation, empowerment of regional and local government, an increased role of local communities and secure land-tenure arrangements. Both processes follow the same shift in the policy planning paradigm from the state as the ‘ruler’ with almost exclusive power towards a more negotiated decision. The difference between the two processes is in the strategic and general character of the NFP and the concrete project orientation of the CFT in the framework of a general governance process.

Following the European priorities, the CFT institutionalisation was supposed to introduce changes in forest policy and local management, particularly: (i) a switch from a sector vision of policy measures to a scale of territory, in which timber production priorities are to be put into competition with other forest utilities, while forest management is considered as a contribution to the local rural development, in line with the regional strategy; and (ii) a change of access to public funding in forestry from a ‘cash-desk’ to a project-logic level and a switch from a ‘mono-actor’ framework of decision-making to a ‘multi-actor’ approach based on partnership and negotiation procedures. At the local level the CFT introduction has required a reorganisation of forest management planning hierarchical levels and hence a change in the architecture of the interactions between the main actors.

In the forestry governance process, the State, as the central decision-making apparatus, has through a mutual adaptation of priorities and positions given the leading role in the CFT formulation to the forest communes, represented at the national level by the National Federation of Forestry Communes (FNCOFOR). In the long run, FNCOFOR will assume the leading coordinating role and provide the guidelines for CFT establishment through promotion and follow-up of CFT project proposals, coordination and evaluation of the CFT activities, and the development of communication and information systems (seminars, web sites). Thus, the heads of forestry communes, who are locally elected politicians, gain new responsibilities and functions in rural development, whereas FNCOFOR emerges as the national-level representative of the locally elected politicians and inter-municipal structures.

The second group of actors concerned by the CFT introduction is the French forest agency (ONF), especially the local agents. In the forest management in France the priority is given to technical decisions, promoting a ‘productivist’ vision of the forests as a timber resource. The requirements of governance and the changed role of the state can consequently open the forest management choices to other stakeholders’ interests, placing at risk the stability of functions of the forestry specialists.

The requirement for a partnership for the project definition and the fact that a ‘territory’ (for the CFT purpose) within a well-defined geographical entity may consist of several larger or smaller forestry communes have promoted a grouping of small-scale private and communal forestry estates, creating a new framework for the expression and prioritisation of demands for an output. All these changes led to a re-appropriation of forest policy by the main beneficiaries, introducing a new distribution of interests and creating new possibilities for power in the process.

The approval of the *Law on the Forests* (2001) with the demand for initiation of CFT and transfer of responsibility to the forest communes can be considered from the local perspective as the initial point of an *outward spiral* in the policy cycle dynamic.

At the local management level, a CFT is intended not only as a flexible planning tool, but also as a contractual framework proposed to the local stakeholders for the integrated development of small-scale forests with a participatory definition of precise objectives and local actions. This new demand is creating the context of learning, redefinition of positions and establishment of new coalitions. As a first reaction to these changes, the forest communes, one of the main local stakeholder groups, took this opportunity to consolidate their position, while defining the forest policy at the regional level. Being the representatives of both all the citizens living in the rural areas and the owners of a multifunctional resource helped them to assume the leading role among the actors involved in CFT project definition. Facing the change in the management planning practices, the forest agency (ONF) personnel locally were generally not highly active at the beginning of the CFT introduction, maintaining their priority on the technical expertise approach. The other actors, including private forest owners, environmentalists and associations of hunters and tourists, were rather passive at the beginning of the CFT process, still doubting the efficiency of this new planning and funding approach, because traditionally the industrial interests have been favoured in forest management choices. Thus the forest communes have progressively become the leading actor, assuming co-ordination of the CFT formulation.

Such a new actor empowerment has changed the demand for policy output with new objectives in forest management contributing to employment and revenue opportunities in rural areas. Such definition of a new leader and a new demand for policy, when a decision-making process is controlled by one leading actor for the achievement of a new objective marks the switch of the spiral into an *inward direction* (as illustrated in Fig. 2). In this dynamics, a change in the ONF local agents' reactions has appeared. Having various roles in the inter-relations and interactions within the general system and subsystems (members of the forestry hierarchy, citizens, villagers, neighbours, family heads, and consumers), the ONF officers could not react by only resisting the changes introduced by CFT. They had to adapt their positions and reactions to the new distribution of power, that is, they had to maintain professional excellence to preserve at least their technical authority and image in forest management decisions without entering into a conflict with the local development objectives. This adaptation was expressed in the creation of

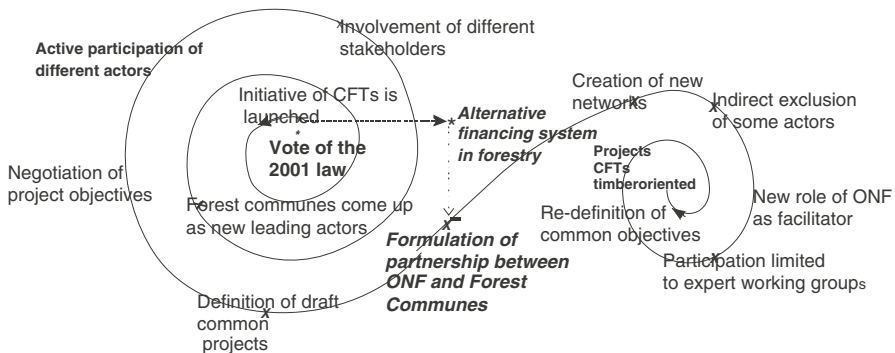


Fig. 2 Double spiral of policy dynamics in the CFT process

coalitions with the mayors of forestry communes for the definition of project objectives. Being the bearers of traditional technical management expertise and thus having a reputation as 'experts with knowledge of forestry issues' the ONF specialists have taken over facilitation of the whole CFT process, consequently eliminating other than productive interests from the projects. In the long run it was not the position of ONF which was adapted, but the reaction to and instruments of influencing the positions of the others. The discourse was changed with declaration of priority to multifunctionality and stakeholders' involvement in forest management decisions. Participatory discussions were introduced in the working groups although limited to experts participation. Service-providing units were established for process facilitation and even a 'uniform-free' presence during organised participatory meetings was prescribed as a symbol of neutrality and change. This adaptation of instruments, rather than the ONF's position has resulted in a timber orientation of most of the CFT projects.

Why was a coalition so easily formed between the forest commune mayors and the ONF? In a resource management policy there is always an opposition between the objectives of conservation and industrial use, hence in the CFT process the new leading actors (the forest communes) have both the other stakeholders' support and a confrontation due to contradictory interests, project objectives and focus. Therefore, to have a successful policy, the forest communes have needed to adapt their positions and reactions in search of a powerful supporter. In the CFT case this powerful supporter is often represented by the national forest agency, the ONF, and by the industrial interests (both possessing a well organised structure, specialised unquestionable expertise and institutionalised presence).

The CFT emerged from the national level as a governance process designed to become a new planning and financing mechanism with an increased role of forestry and empowerment of new actors in sustainable rural development. In the local context the initial idea of CFT has been changed: due to the actors' strategies aimed of maintenance of their functions achieved through a mutual adaptation, the CFT definition has promoted redistribution of power among the local forestry actors whilst preserving the balance in favour of production goals in forest policy.

Case Study of Kyrgyzstan: The 'Collaborative Forest Management' and Leasing of Small Forest Plots

In Kyrgyzstan (former USSR state, Central Asia), as in some other CIS countries, the reform of forest management was caused by the changes in the internal context with the need to switch from the conventional state intervention (former command-and-control decision-making) to a new system better adapted to the market economy conditions, but often introduced and promoted by international donors.

After independence was gained in 1991, the internal context relevant for the understanding of forest policy reform in Kyrgyzstan was characterised by important general structural, social, economic and political changes, including decentralisation and privatisation of the main economic assets. The transition to the market economy and consequent economic recession caused pauperization, especially of the rural population, and a consequent increase in dependence on forest resources.

The increasing local needs came into contradiction with the political reality, in which forests were still in state property, whereas the management activities and state ownership rights were exercised by state forest management enterprises (called *leshozes*). The role of the State in forest management also needed to be re-considered in the background of general political and economic changes in Kyrgyzstan. In this context the international donor community was active in Kyrgyzstan, providing support for reorganization of various sectors of the economy, including the forest sector.

The international priorities of sustainable development, requiring, involvement of local stakeholders in the resource management and decision-making was a core element of the forest policy reform content and approaches. Thus in the case of Kyrgyzstan the changes in the forest policy dynamics locally were not caused by a spontaneous reaction of various local actors, but rather were introduced from outside with an idea that external expertise can promote changes in local forest management through the empowerment of local actors.

The empowerment of local actors was right in line with the national forest policy reform taking place in Kyrgyzstan since 1997 including an NFP process, which was also introduced by international cooperation but strictly follows the governance principles. The ‘sustainable forestry development’ and ‘involvement of the local population and forest users in forest management’ were declared as forest policy goals at the national level (Government of KR 1999, 2004). It was planned to reach sustainable development locally through the change of forest-use norms and practices with a transfer of responsibilities to the local users based on joint forest management. The concept of community forest management (CFM) was initially introduced only in one particular forest, a walnut-fruit forest in the South of Kyrgyzstan, and with no link to the national policy at that time.

The dynamics of CFM process may be considered over a 10-year period (1995–2005). The introduction of a concept ‘Community Forest Management’ by international experts with the objective of conservation of biodiversity of natural walnut forests (as a rich genetic pool) through decreased pressure of rural uses on the forests (i.e. on grazing, other minor agricultural activities, collection of firewood and non-timber forest products) may be considered as a starting point of a decision-making spiral (as illustrated in Fig. 3). Following the international discourse on sustainable development, it was presumed that forest degradation in the conditions of a general economic decline might be slowed only if the local users are involved in forest management. Thus three main actors may be distinguished in this process: (i) the rural population living in the walnut area, as a potential beneficiary of this change in forest management; (ii) the Kyrgyz state forest service represented by the administration at the national level and *leshozes* at the local level, exercising forest management, use and state control of forests; and (iii) the external actor, international experts in participatory forest management, intended to change the management practices.

Although the CFM concept was introduced from outside and there was no strongly expressed local demand for this type of change, the radius of spiral was increasing in the outward direction due to the internal dynamics of learning in the process imposed by the context of transition. The local population, highly dependent on forest resources, has seen CFM as a means to gain a legal permission for forest use thus solving the opposition between foresters as ‘forest police’ and villagers as permanent

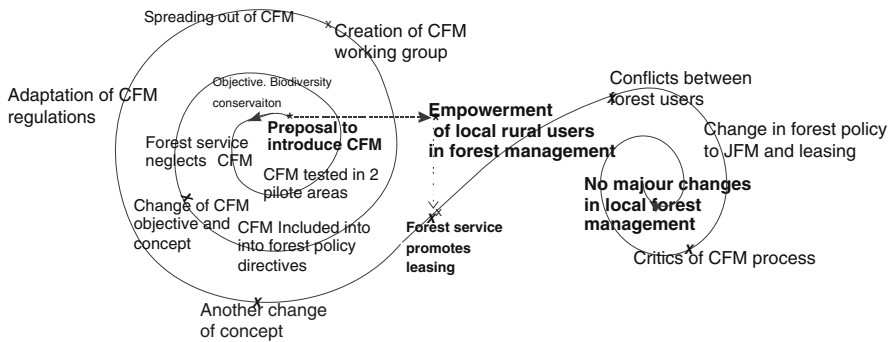


Fig. 3 Double spiral of CFM process in Kyrgyzstan

‘poachers’ in forest use. Having accepted this proposed change, the local population needed to learn how to organise themselves into a community for forest management, a new type of interactions after the 70 years of Soviet collectivisation with [its] positive and negative impacts and its complete annihilation after the independence.

The forest service, initially highly sceptical about involvement of the local population in forest management (doubting the local people’ technical knowledge in forest management, but also worried by their own possible replacement by the new type of management) still had to accept the proposed approach. Contrary to the general changing context, the forest sector did not undergo any major changes compared to the Soviet period, preserving strict vertical administrative hierarchy and centrally defined plans, oriented to statistical implementation reports, but with considerably reduced state financing. The leshozes or local forest management units were under a double pressure in this situation: the need to report to the national administration on plan implementation, and increased conflict with the local population due to ‘illegal activities in the forests’. CFM was therefore viewed by local forest service personnel as an instrument for reducing forest management costs and a means to soften forest use conflicts with the local population. Besides, economic and material support provided to the leshozes selected for testing CFM was an important factor promoting acceptance of CFM openness for adaptation.

The international experts with rich experience of CFM in various countries, where the social structure was mainly based on communities (especially in Nepal), were testing this approach in a new context and were confronted by a permanent need to adapt objectives, concepts and proposed approaches. Thus the initially declared focus of CFM stated as promotion of *sustainable forest management* and *conservation of biodiversity* of the walnut forests together with the local people (based on *common property resource principle*) (Carter et al. 2003; Fisher et al. 2004) was in line with the international debate on sustainability in the early 1990 but did not match with the priorities of the rural population in competition for the limited resource use. The proposed approach of *forest management* based on *community* with a transfer of control over forests from the state to communities as it has worked in Nepal, India and Pakistan did not work in the Kyrgyz context. The institution of *community* as it exists in these countries was not a Kyrgyz reality. Besides, after the Soviet heritage of ‘collectivism’ there was strong resistance to group activities and responsibilities,

hence the approach which emerged was rather different from the *community based* approach initially envisaged (Carter et al. 2003; Fisher et al. 2004). As part of adaptation, in the ‘external expert discourse’, this name was changed to *collaborative forest management* (CFM) with expectations that CFM in Kyrgyzstan would still have some of the key characteristics of *collaborative forest management* elsewhere (Fisher et al. 2004; Carter and Gronow 2005).

A new adapted CFM (in the sense of ‘collaborative’) objective was pronounced as *poverty reduction* aimed at a working partnership between the key-stakeholders in the management of a given forest, in particular the immediate local users and the relevant forest authorities (Fisher et al. 2004).

During this outward spiral of learning, no new long-lasting coalitions can be distinguished, the forest service, being careful at the beginning of the process because of the uncertainty of the concepts and approaches, was quite opposed to any kind of partnership. Besides, the policy change was going directly from the international expertise level to the local users, with practically no interactions with the national level. Being part of a hierarchical structure, the local forest service units (*leshozes*) could not take initiatives, which would not be supported by the administration at the national level. The international experts were confronted with the opposition of collective action locally where no coalitions with the communities of local users were possible. Individuals, families and groups of users have gained the right of access to the forest produce in exchange for forest work, precisely described in the contracts, whereas forest guards preserved the functions of control and technical expertise. As an effort to introduce this local CFM process into the national forest policy a working group was established at the national level in charge of formulation of CFM regulations. This working group was more-or-less successful in defining modalities for confusing concepts, but was still criticised by both the forestry administration and the international experts. The term CFM and the concept have been normatively fixed in the new national forest policy and the new Forest Code (Government of Kyrgyz Republic 1999), but have never had a clearly defined content.

Finally, no real demand for a policy change has been formulated hence no real adaptation of position was required from the forestry administration. Having adopted the ‘local users’ involvement’ discourse, the forestry administration undertakes the lead over the process. Using the ambiguity of the CFM concept as a reason for failure in the introduction of this new approach, the forestry administration promotes the practice of *forest land leasing*, which provided seasonal access rights to small forest plots in exchange for services or payment. The promotion of leasing and its introduction into the ‘*joint forest management*’ (JFM) approach in the normative documents,² may be considered as a switch point of the spiral, because the initial

² The CFM abbreviation is translated in Russian as OVLH, meaning ‘Obshinnoe Vedenie Lesnogo Hozyaistva’, i.e. community forest management, and was used in the Kyrgyz Normative documents until 2004, even though it has been changed in the international experts’ discourse into *collaborative forest management* in 1997. The revised National Concept of Forestry Sector Development stated that ‘there is still no common understanding of CFM (‘OVLH’ in the Russian version), leading to misinterpretation and violations’ (Kyrgyz Republic Government 2004, Russian text, p. 27; English text, p. 45). Consequently, in the National Forest Programme (2005–2015) (Government of Kyrgyz Republic 2005) and in the National Action Plan (2006–2010) (Government of Kyrgyz Republic 2006) the word ‘collaborative’ was replaced by ‘joint’ and CFM was finally changed into JFM.

objective of empowerment of local users in forest management is not followed any more whereas the forest administration is clearly defined as the leading actor in the process.

Involvement of the local population into joint forest management has been declared as one of priorities of the national forest policy to be spread out all over the country, while the forest service returns to the initial principles of forest management locally. According to the scheme proposed within the CFM contracts, the individual households (tenants) have gained usufruct rights to produce of a forest plot (within a specified time-limit) in exchange for some forest work defined and controlled by *leshoz* and a payment in kind of the harvested products (a specified share). Thus in the practical implementation of the 'working partnership in the management', the tasks were separated: the foresters were to direct and control activities (as *management* which was a traditional function of foresters in the understanding of the local population, thus did not cause great objections even in the changed context) and the tenants were to carry out forest work. In all this discourse about CFM, leasing was finally a better known and easier to understand approach for the local people. It was less conflictual for the forest users because it did not have empowerment (and, potentially, a change of ownership) as an objective, and was highly convenient for the foresters, still providing labour and some income, but without any obligation to change management approaches. The gap between the global concepts and local management objectives was caused not only by the uncertainty of concepts, but mainly by the disregard of local contexts, which was later admitted in the experts' report (Fisher et al. 2004).

Among the unanticipated effects of this process there are mutual dissatisfaction and critics between the Kyrgyz forestry administration and the international project about unsuccessful CFM introduction. Locally there are conflicts between the CFM tenants demanding exclusive access rights to their plots and the rest of the local population who have no CFM plots and thus feel disregarded and deprived of their rights to forest use. Most would prefer an equal distribution of rights of use, while the situation with the CFM plots is judged unjust and sometimes even socially explosive (Fisher et al. 2004). Thus, leasing relations have actually worked in practice as a most appropriate form of 'partnership' between the key stakeholders.³ In the long run, at the end of the double spiral, the forestry administration has not only preserved its functions and traditional management principles but even consolidated its position in the face of conflicting local rural users.

In the case of Kyrgyzstan the policy change has been brought about from outside, from the international level directly to the local level. Because the links in the interactions were more intensive in the direction from the international expertise to the local level ('bringing-in the knowledge'), the importance of the local context and capacities remained under-estimated, causing gaps in interpretation of global values into the local practice. The state was considered as being not able to adapt to the new market relations and even as an impediment to the social changes through

³ In the *National Forest Programme* (2005–2015) and *National Action Plan* (2006–2010) the working 'joint forest management and leasing relations' has totally replaced CFM for forest management while as a symbiosis of adaptability a term '*CFM lease*' has appeared.

decentralisation and local empowerment. It was given a secondary role in this process, through formal participation in working groups with no real engagement. The principal focus at the local level and disregard for the role of the state and the local context may be counted as one of the main obstacles for successful change in local forest management practices in Kyrgyzstan. The openness of a political system for an input and participation from societal groups are important aspects of the so-called 'political opportunity structure' (Kitschelt 1986; Kriesi et al. 1995). In the framework of this political opportunity structure, the State may range along a continuum from 'strong' to 'weak', according to their openness to input (governance, participation) and their capacity for output (policy implementation). Thus, a state's overall strength or weakness is usually considered as proceeding from internal factors such as centralisation, strength of social cleavages, strength and number of political parties and patterns of linkages between the interest groups and the government. A strong state is relatively closed to input and has a high capacity for controlling output. It tends to be centralised with weaker or passive interest groups. Which is the case in Kyrgyzstan: the empowerment of local users introduced from outside without a proper consideration of the internal context did not get an immediate success. With the political opportunity structure of the strong state, inherited by Kyrgyzstan from the Soviet Union background, this policy change can not be introduced only from the bottom. As the state has a high capacity for controlling the policy output, the involvement of this level from the very beginning of the process would be an important factor for success. The same factor of a strong state has promoted the adaptability capacity of the national forest agency in the aim of preserving its main functions (as a representative of the state in the forest management).

A *political culture* consisting of core beliefs on how governmental, political and economic life should be carried out is another aspect important for the understanding of governance processes, because it creates a framework for policy change (Sabatier 1988). Political culture of the rural forest users in Kyrgyzstan inherited from the forest Soviet Union made them ready to accept the top-down decision making, but at the same time opposed to any group action. This was another break on the way of the local users empowerment. Being opposed to associations and coalitions for lobbying their interests, they had only a small 'generated' amount of learning at the initial stages of CFM introduction, and thus were not in the position of an equal actor of the process. Being preoccupied with solving immediate problems, they were becoming even weaker (as actors) because of increasing internal competition for access to the forest resource.

Learning to be Resilient

What can be concluded from the above examples is that a process of change in forest policy and management procedures is to a large extent determined by the elements in the system, and derived from the formal or informal strategies of the stakeholders involved in the reform.

On the one hand, the stakeholders cannot be completely opposed to a global process, and they need to adapt their positions as reaction to the demands for

change, in order to preserve the functioning of the system. On the other hand, they try to change as little as possible (and, hence, to loose as little as possible of their power) in management and access to the resource. Thus the stakeholders are obliged to re-define their rhetoric and statements, search for alliances and coalitions, and adapt their goals and strategies to the expressed demands.

This obligation for adaptation is reinforced by the introduction of governance, which necessarily provokes new coalitions and networking. As noted by Foucault (1982), this is the way the power of actors in the system is determined by the ‘architectural’ disposition, shaped by the institutional environment and interactions. The power is generated by the discourse in the social relations between the various partners exercising diverse forms of power, but each longing to, at least, keep their actual power. In the policy and management systems such interactions contribute to the definition of new modes for translating external demands into decisions, as it is presented in the Easton’s (1965b) ‘input–output framework’. Such systems are supposed to be both adaptive to the context and consolidative of their power.

The local-scale changes induced by the global-scale discourse create gaps due to the difference in global and local systems’ dynamics, especially in relation to small-scale forestry, but in the long run the necessity to cope with the gaps induces further changes and modalities in the interactions of both scales. This strategy is clearly developed by the strongest stakeholders, i.e. those who are not interested in a complete redistribution of the cards. Thus this dynamic change-gap-adaptation-change directly contributes to the *resilience* of the system and adaptability of the stronger actors.

The double spiral framework helps in providing an ex post explanation of the network arrangements and moving forces in the process of change but still remains unable to predict future system changes because mutual learning between the actors in the process is one of the major factors promoting adaptability, a better understanding of these learning mechanisms is required to be more predictive.

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